

Assumptions and Prerequisites (CentOS 9)

1. System Requirements

- CentOS 9 server (or RHEL 9)

```
[root@agent01 ~]# cat /etc/redhat-release
CentOS Stream release 9
[root@agent01 ~]#
[root@agent01 ~]# date
Sat 03 Jan 2026 02:35:31 PM +08
[root@agent01 ~]#
```

- 4 GB RAM and 10 GB drive space recommended

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2. Admin Privileges Account and Puppet Agent

- User with sudo privileges [here using root]

```
[root@agent01 ~]# id
uid=0(root) gid=0(root) groups=0(root) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
[root@agent01 ~]#
[root@agent01 ~]# whoami
root
[root@agent01 ~]#
```

- Puppet agent installed on the node

```
[root@agent01 ~]# rpm -qa|grep -i puppet-agent
puppet-agent-6.28.0-1.el9.x86_64
[root@agent01 ~]#
[root@agent01 ~]#
```

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3. Access to Repositories

Agent should have access to below repositories.

1. Jenkins repository
 - a. <https://pkg.jenkins.io/redhat-stable/jenkins.repo>
 - i. Required packages
 1. Jenkins
 2. fontconfig
2. Adoptium/OpenJDK repository
 - a. [https://packages.adoptium.net/artifactory/rpm/rhel/\\$releasever/\\$basearch](https://packages.adoptium.net/artifactory/rpm/rhel/$releasever/$basearch)
 - i. Required packages
 1. java-21-openjdk

Note: if the agent does not have internet access, the repositories can be mirrored and hosted internally in:

- Git/GitHub/Bitbucket
- S3 bucket or internal artifact repository

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4. Services and ports

- TCP port **8000** (custom Jenkins port) should be allowed to access Jenkins UI

```
[root@agent01 ~]# firewall-cmd --list-all |grep -i 8000
    ports: 8000/tcp
[root@agent01 ~]#
[root@agent01 ~]#
```

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5. Puppet Setup

- Puppet server installed and running

```
[root@master ~]# rpm -qa|grep -i puppetserver
puppetserver-7.17.3-1.el9.noarch
[root@master ~]#
[root@master ~]# systemctl is-active puppetserver
active
[root@master ~]#
```

- Node connected to Puppet master
- Create jenkins directory inside puppet modules and put the puppet code inside init.pp file
 - a. /etc/puppetlabs/code/environments/production/modules/jenkins

```
[root@master ~]#
[root@master ~]# ls -ld /etc/puppetlabs/code/environments/production/modules/jenkins
drwxr-xr-x 4 root root 36 Jan  3 13:43 /etc/puppetlabs/code/environments/production/modules/jenkins
[root@master ~]# ls -ltr /etc/puppetlabs/code/environments/production/modules/jenkins/manifests/
total 4
-rw-r--r-- 1 root root 2262 Jan  3 14:13 init.pp
[root@master ~]#
```